

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 31 May 2001 (31.05.01)	
International application No. PCT/AU00/01168	Applicant's or agent's file reference 6514ELF
International filing date (day/month/year) 25 September 2000 (25.09.00)	Priority date (day/month/year) 24 September 1999 (24.09.99)
Applicant HOWSON, Leslie, Lawrence	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

24 April 2001 (24.04.01)

☐ in a notice effecting later election filed with the International Bureau on:
2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer J. Leitao Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

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From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

EAGAR NEWCOMB & BUCK
Locked Bag 12
Southport, QLD 4215
AUSTRALIE

Date of mailing (day/month/year) 07 décembre 2001 (07.12.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 6514ELF	
International application No. PCT/AU00/01168	International filing date (day/month/year) 25 septembre 2000 (25.09.00)

1. The following indications appeared on record concerning:

☐ the applicant ☐ the inventor ☒ the agent ☐ the common representative

Name and Address PIZZEYS PATENT & TRADE MARK ATTORNEYS Telstra House Level 11 167 Eagle Street Brisbane, Queensland 4000 Australia	State of Nationality	State of Residence
	Telephone No. 07 3221 9955	
	Facsimile No. 07 3221 8077	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address EAGAR NEWCOMB & BUCK Locked Bag 12 Southport, QLD 4215 Australia	State of Nationality	State of Residence
	Telephone No. 07 5591 0317	
	Facsimile No. 07 5591 0319	
	Teleprinter No.	

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input checked="" type="checkbox"/> other: PIZZEY PATENT & TRADE MARK

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Anne KARKACHI Telephone No.: (41-22) 338.83.38
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/01168

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : E03F 5/04		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) E03F 5/04, E04F 21/24		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU : IPC AS ABOVE		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,Y	US 5921282, A (CASTILLO) 13 July 1999	1-5, 14-16
X,Y	DE 3620132 A (DALLMER) 24 September 1987	1-5, 14-16
X,Y	GB 2331529 A (DALLMER) 26 May 1999	1, 14-16
X,Y	AU 52071/98, A (CAROMA IND.) 23 July 1998	1, 14-16
Y	DE 4411521 A (FELLA) 5 October 1995	1,2
Y	DE 4329652 A (SCHWARZ) 30 March 1995	1,2
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>		
Date of the actual completion of the international search 14 November 2000		Date of mailing of the international search report 16 NOV 2000
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer DAVID LEE <i>D Lee</i> Telephone No : (02) 6283 2107

INTERNATIONAL SEARCH REPORT
Information on patent family membersInternational application No.
PCT/AU00/01168

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member	
US	5921282	CA	2232927	US	6076559
DE	3620132				
GB	2331529	DE	19751344		
AU	52071/98	NZ	329587		
DE	4411521	NONE			
DE	4329652	NONE			
DE	3819173	NONE			
EP	51316	DE	3041353		
END OF ANNEX					

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/01168

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 3819173 A (GRUMBACH) 14 December 1989	1, 14-16
Y	EP 51316 A (SCHMITZ) 12 May 1982 *****	16

PATENT COOPERATION TREATY
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

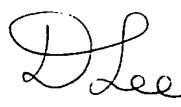
REC'D 05 FEB 2002

WIPO

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Applicant's or agent's file reference 6514ELF	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU00/01168	International Filing Date (<i>day/month/year</i>) 25 September 2000	Priority Date (<i>day/month/year</i>) 24 September 1999
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ E03F 5/04		
Applicant ELFBLEND PTY LTD et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of 4 sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheet(s).	
3.	This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application	

Date of submission of the demand 24 April 2001	Date of completion of the report 25 January 2002
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  DAVID LEE Telephone No. (02) 6283 2107

I. Basis of the report

1. With regard to the **elements** of the international application:*
- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the claims, pages , as originally filed,
 pages , as amended (together with any statement) under Article 19,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the sequence listing part of the description:
 pages , as originally filed
 pages , filed with the demand
 pages , received on with the letter of
2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language which is:
- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished
4. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.
5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 6-13	YES
	Claims 1-5, 14-16	NO
Inventive step (IS)	Claims 6-13	YES
	Claims 1-5, 14-16	NO
Industrial applicability (IA)	Claims 1-16	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

US 5921282, DE 3620132, GB 2331529, AU 52071/98, DE 4411521, DE 4329652, DE 3819173, EP 51316.

Novelty & Inventive step - Claims 1-5, 14-16.

The first four citations all disclose covers, grilles, ledges etc for plumbing fixtures to be placed in-situ during floor construction. The citations thus disclose all the features of the above claims.

The other citations disclose collectively all the features of these claims - it being within the skilled workers non-inventive skill to combine the features to arrive at the invention in the above claims for the same reason.

Hence, these claims are not novel and lack an inventive step.

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 17-19 do not comply with PCT Rule 6.(2).(a) because they rely on the description and/or drawings for their disclosure

(19) World Intellectual Property Organization
International Bureau



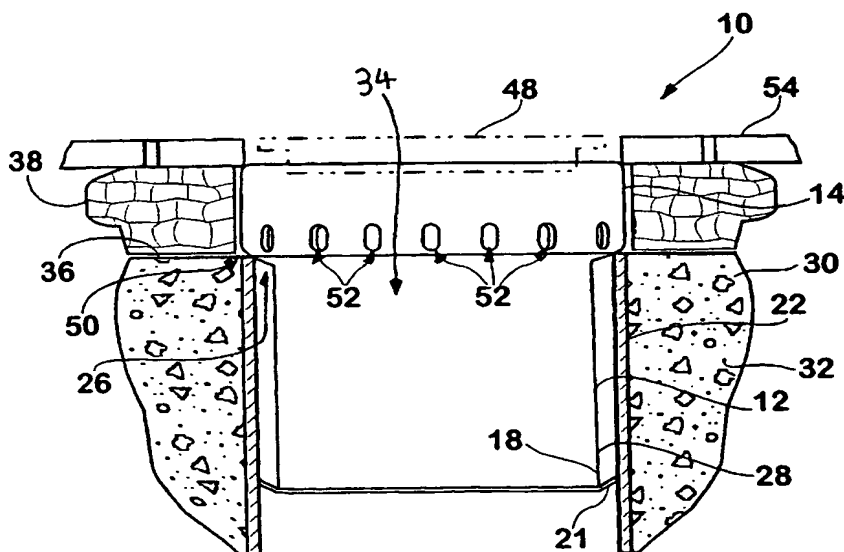
(43) International Publication Date
5 April 2001 (05.04.2001)

PCT

(10) International Publication Number
WO 01/23680 A1

- (51) International Patent Classification⁷: E03F 5/04 (74) Agent: PIZZEYS PATENT & TRADE MARK ATTORNEYS; Telstra House, Level 11, 167 Eagle Street, Brisbane, Queensland 4000 (AU).
- (21) International Application Number: PCT/AU00/01168
- (22) International Filing Date:
25 September 2000 (25.09.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
PQ 3083 24 September 1999 (24.09.1999) AU
59308/99 10 November 1999 (10.11.1999) AU
PQ 4547 8 December 1999 (08.12.1999) AU
- (71) Applicant (for all designated States except US): ELF-BLEND PTY LTD [AU/AU]; 28 Sunset Boulevard, Surfers Paradise, Queensland 4217 (AU).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): HOWSON, Leslie, Lawrence [AU/AU]; 28 Sunset Boulevard, Surfers Paradise, Queensland 4217 (AU).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— With international search report.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A DRAINAGE PIPE COVERING KIT FOR USE DURING BUILDING OR FLOOR CONSTRUCTION



(57) Abstract: An accessory for use in construction includes a conduit (12) that has an inlet end (34) portion and an outlet end (18) portion. The outlet end (18) portion is mountable on a drainage pipe (22) so that the conduit (12) and the drainage pipe (22) are in fluid communication with each other. A removable closure member (40) is mounted on the inlet end (34) portion to close the conduit (12) when not in use or during building construction, so that ingress of material or detritus into the drainage pipe (22) is inhibited.

WO 01/23680 A1

A DRAINAGE PIPE COVERING KIT FOR USE DURING BUILDING OR FLOOR CONSTRUCTION

This invention relates to drainage pipes. More particularly, this invention relates to an accessory for use in construction, to a drainage kit and to a method of construction.

Conventionally, drainage pipes are usually positioned in a substrate to be flush with or to extend partially from the substrate. Once this has been done, a layer of screed is formed on the substrate. A bed of tiles may or may not then be positioned on the screed. It has been found that, during construction, screed material is often disposed of in the drainage pipe. Where tiles are layed on the screed layer, the tiles are broken off at a region about the drainage pipe to provide a location in which a drain grate can be positioned. These pieces of broken tile are often also disposed of in the drainage pipe.

The waste screed and tile pieces can cause substantial problems at a later stage. In fact, it is well known in the plumbing trade that initial call backs on new buildings are usually due to blockages resulting from material disposed of in the drainage pipes.

A problem presently facing tilers is the provision of a level mark which the tiler can use to determine the thickness of screed to be placed on the substrate. At present, tilers have a difficulty in achieving a consistently level surface of screed because of the lack of a central mark that they can use as a reference point.

It will be appreciated that it would be desirable for a means to be provided whereby the above issues can be addressed.

According to a first aspect of the invention, there is provided an accessory for use in construction, the accessory including

a conduit that has an inlet end portion and an outlet end portion, the outlet end portion being mountable on a drainage pipe so that the conduit and the drainage pipe are in fluid communication with each other; and

5 a removable closure member which is mounted on the inlet end portion to close the conduit when not in use so that the ingress of detritus into the drainage pipe is inhibited.

10 The accessory may include a reference level arrangement that is positioned on the conduit and is configured so that, when the conduit is mounted on the drainage pipe, the reference level arrangement provides at least a reference level for a thickness of a screed layer to be formed on a substrate.

15 The conduit may be circular cylindrical. The inlet end portion of the conduit may be of an enlarged diameter. Further, a distance between a shoulder defined at a junction between the inlet end portion and a remaining portion of the conduit and an end of the inlet end portion may be at least substantially equivalent to a desired thickness of a screed layer, so that the inlet end portion defines the reference level arrangement.

20

The removable closure may be connected to the inlet end portion by a zone of weakness to facilitate separation of the closure from the inlet end portion.

25

The inlet end portion may have a plurality of openings defined therein to permit drainage of excess water collected about the inlet end portion.

30 The accessory may include a grate member that is received in the inlet end portion, once the closure has been removed. The grate member may be an assembly of a grate frame and a grate element. The grate

frame may define an inwardly extending lip on which the grate element is supported, while the grate element may define a shoulder that bears against the lip of the grate frame.

5 The accessory may be of a plastics material.

10 The accessory may include a sealing member having a flange portion and a body portion. The body portion may define a passage in which the conduit is received and the flange portion may be positioned to extend radially from the conduit when the conduit is received in the passage. The conduit and the body portion may be attachable to a drain pipe positioned in a substructure, with the flange portion overlying an upper surface of the substructure.

15 The sealing member may be of a suitable sealing material such an elastomeric material.

According to a second aspect of the invention, there is provided a drainage kit, the kit including

20 a conduit that has an inlet end and an outlet end;
a removable closure that is mounted on the inlet end of the conduit to close the conduit when not in use; and
a sealing member having a flange portion and a body portion that defines a passage, the conduit being mountable to the body portion so
25 that the outlet end of the conduit and the passage are in fluid communication with each other.

According to a third aspect of the invention, there is provided a method of construction, the method including the steps of

30 mounting a conduit on a drainage pipe, the conduit having an inlet end portion and an outlet end portion so that the conduit and the drainage pipe are in fluid communication with each other, the inlet end

portion having a removable closure member to close the conduit when not in use so that the ingress of detritus into the drainage pipe is inhibited;

removing the closure member; and

5 positioning a grate member in the inlet end portion, once the closure has been removed.

10 An accessory in accordance with this invention may manifest itself in a variety of forms. It will be convenient hereinafter to describe in detail preferred embodiments of the invention with reference to the accompanying drawings. The purpose of this specific description is to instruct persons having an interest in the subject matter of the invention how to carry the invention into practical effect. It is to be clearly understood, however, that the specific nature of this description does not
15 supersede the generality of the preceding broad description. In the drawings:

FIG. 1 shows a plan view of a first embodiment of an accessory, in accordance with the invention, for use in construction;

FIG. 2 shows a side view of the accessory of FIG 1;

20 FIG. 3 shows a side sectioned view of the accessory of FIG 1, without a closure piece;

FIG. 4 shows the accessory of FIG 1 in a typical application;

FIG. 5 shows a side sectioned view of a second embodiment of an accessory, in accordance with the invention, for use in construction;

25 FIG. 6 shows a side view of the accessory of FIG 5 in a typical application;

FIG. 7 shows a plan view of a third embodiment of an accessory, in accordance with the invention, for use in construction;

FIG. 8 shows a side view of the accessory of FIG 7.

30 FIG. 9 shows a conduit for a fourth embodiment of a drainage accessory, in accordance with the invention;

FIG. 10 shows a schematic side view of the drainage accessory of FIG. 9;

FIG. 11 shows one embodiment of a grate of a drainage kit, also in accordance with the invention;

FIG. 12 shows a schematic side view of the grate;

FIG. 13 shows a plan view of the grate, in position;

FIG. 14 shows a plan view of a conduit of the kit;

FIG. 15 shows a side view of the conduit of FIG 14;

FIG. 16 shows a side sectioned view of a seal member of the kit;

FIG. 17 shows a side view of the seal member of FIG 16;

FIG. 18 shows a side view of another embodiment of the accessory;

FIG. 19 shows a side sectioned view of another embodiment of a seal member for use with the embodiment of FIG 18; and

FIG. 20 shows a side view of the seal member of FIG 19.

In FIGS 1 to 4, reference 10 generally indicates an accessory, in accordance with the invention, for use in construction. The accessory 10 includes a conduit 12. The conduit 12 has an inlet end portion 14 which defines an inlet 16 and an outlet end portion 18 which defines an outlet 20.

The outlet end portion 18 has a radially extending flexible lip 21 defined thereon. The lip 21 is dimensioned to be deformed when the conduit 12 is inserted into a drainage pipe 22. Furthermore, the flexible lip 21 is of sufficient resilience to result in the conduit 12 being retained in position in the drainage pipe 22.

The conduit 12 is circular cylindrical with the inlet end portion 14 being of an increased diameter. It follows that a shoulder 26 is defined between the end portion 14 and a remaining portion 28 of the conduit 12.

As is well known in the field, the drainage pipe 22 is mounted in a substrate 30 which, in this case, is in the form of concrete 32. The inlet end portion 14 has a diameter that is greater than that of the drainage pipe 22.

- 5 The conduit 12 is inserted, outlet end 18 first, into an inlet 34 of the drainage pipe 22. The conduit 12 is inserted so that the shoulder 26 bears against an upper surface 36 of the concrete substrate 30.

- 10 A length of the inlet end portion 14 is equivalent to a thickness of screed 38 to be formed on the substrate 30. Thus, the inlet end portion 14 defines a reference level means whereby a tiler can use the inlet end portion 14 as a reference for laying the screed 38.

- 15 A removable closure 40 is mounted on the inlet end portion 14 via a zone of weakness 44. The zone of weakness 44 permits and facilitates the removal of the closure piece 42 from the remainder of the conduit 12.

- 20 A resultant opening 46 following removal of the closure piece 42 is dimensioned so that a drain grate 48 can be fitted in the opening 46.

A lower region 50 of the inlet end portion 24 has a plurality of openings 52 defined therein. The openings 52 are positioned to be substantially in alignment with the upper surface 36 of the substrate 30.

- 25 The accessory 10 is in the form of a unitary one piece structure. Further, the accessory 10 is manufactured from a resilient plastics material, such as a polyvinylchloride.

- 30 In use, the conduit 12 is inserted, outlet end 18 first, into the drainage pipe 22 until the shoulder 26 bears against the inlet 34 of the drainage pipe 22 or the upper surface 36 of the substrate 30. A tiler can then lay the screed 38 on the concrete 32 using the inlet end portion 14 as a guide to the thickness of the

screed 38 to be laid. A layer of tiles 54 is then laid on the screed 38. Both the screed 38 and the tiles 54 are laid in a conventional fashion.

5 The tiles are then cut at the location of the drainage pipe 22 to accommodate the drain grate 48. Once the area has been cleaned of screed material and tile chips, the removable closure 40 is removed. The drain grate 48 is then fixed in place, in a conventional manner.

10 In FIG's 5 and 6, reference numeral 60 generally indicates a second embodiment of an accessory, in accordance with the invention, for use in construction. With reference to FIG's 1 to 4, like reference numerals refer to like parts, unless otherwise specified.

15 A primary difference between the accessory 10 and the accessory 60 are the relative dimensions of the inlet end portion 24 and the remaining portion 28. This is clear from the drawings.

20 In FIG's 7 and 8, reference numeral 70 generally indicates a third embodiment of an accessory, in accordance with the invention, for use in construction. With reference to FIG's 1 to 6, like reference numerals refer to like parts, unless otherwise specified.

25 Again, a primary difference between the accessories 10, 60 and the accessory 70 are the relative dimensions of the inlet end portion 24 and the remaining portion 28. This is clear from the drawings.

30 In FIG 10, reference 80 generally indicates a further embodiment of a drainage accessory, in accordance with the invention. With reference to FIGS 1 to 8, like reference numerals refer to like parts, unless otherwise specified. The conduit 12 of the accessory 80 is shown in FIG 9.

The accessory 80 is mounted on an existing drainpipe 82. The accessory 80 includes a seal member or puddle flange 84. The puddle flange 84 includes a body portion 86 and a flange portion 88.

- 5 The body portion 86 defines a passage 90. A lower end portion 92 of the body portion 86 is received in the drainpipe 82.

10 The outlet end portion 18 of the conduit 12 is received in the drainpipe 82. The lower end portion 92 of the body portion 86 of the puddle flange 84 is sandwiched between the outlet end portion 18 of the conduit 12 and a wall 94 of the drainpipe 82.

15 The puddle flange 84 is dimensioned so that, when the lower end portion 92 of the puddle flange 84 is in position, the flange portion 88 overlays a region of a substructure in the form of a slab 96 surrounding the drain pipe 82.

20 The inlet end portion 14 is dimensioned so that the shoulder 26 bears against the flange portion 88 of the puddle flange 84 so that the flange portion 88 is sandwiched between the shoulder 26 and the slab 96.

The puddle flange 84 is of a suitable sealing material, and, in particular, is of an elastomeric material. This provides a sealing effect between the slab 96 and the inlet end portion 14.

- 25 In FIGS 11, 12 and 13, there is shown a grate 98 in accordance with the invention. The grate 98 is an assembly of a grate frame 100 and a grate element 102.

30 The grate frame 100 is rectangular and defines a circular opening 104. In particular, the grate frame 100 defines an inwardly extending lip 106 positioned on a periphery 108 of the opening 104.

The grate element 100 has a circular cylindrical body 110 that is dimensioned to fit snugly through the opening 104. An upper end portion 112 of the grate element 100 has an enlarged diameter so that a shoulder 114 is defined at a junction between the upper end portion 112 and the remainder of the body 110.

5 The shoulder 114 is positioned to bear against the lip 106, in use. Furthermore, the upper end portion 112 is of a suitable thickness so that the grate element 102 is flush with the grate frame 100.

10 As can be seen in FIG 14, the removable closure 40 is in the form of a blank 116 connected to the conduit 12 via the zone of weakness 44. The zone of weakness 44 is such that cutting of the blank 116 away from the conduit 12 is facilitated. The zone of weakness 44 is circular and demarcates a cross sectional area that is equivalent to a cross sectional area of a lower portion 118 of the grate element 102.

15 As can be seen in FIG 10 and FIG 18, the grate frame 100 rests on top of the enlarged inlet end portion 24. In this position, the grate element 102 extends downwardly through the resultant opening 46 that is defined when the removable closure 40 is removed.

20 In a floor structure, there is provided a slab level 120, a bedding level 122 and a tile level 124. The thickness of the inlet end portion 14 is such that the height of bedding to be laid on the slab 96 corresponds with the height of an upper surface 126 of the inlet end portion 14 when the inlet end portion 14 is in position.

25 A thickness of the grate frame 100 corresponds to a distance between the bedding level 122 and the tile level 124.

30 It will therefore be appreciated that the inlet end portion 14 serves as a reference level for a tiler laying the bedding.

Once the bedding has been laid, the tiles are placed on the bedding. The tiles are then cut and shaped to suit the grate 98. The area is then cleaned of any debris. The closure 40 is then cut away from the inlet end portion 14. The grate 98 is placed as shown in FIGS 10 and 18. The fact that the thickness of the grate frame 100 corresponds to the distance between the bedding level 122 and the tile level 124 serves to provide a substantially flush finish.

Tiles are usually rectangular. Thus, the rectangular grate frame 100 facilitates accurate cutting of the tiles and reduces the amount of time spent by a tiler in correctly shaping the tiles in the region of the drainage accessory 80.

A plurality of drainage openings 128 are defined in the inlet end portion 14 proximate the shoulder 26. The drainage openings 128 are positioned so that, when the conduit 12 is in position on the drain pipe 82 and prior to the bedding and the tiles being laid, any water accumulating in the region of the drainpipe 82 is drained away via the openings 128.

The drainage accessory 80 can be supplied in the form of a kit, also in accordance with the invention. The kit can include the conduit 12 and the puddle flange 84. In addition to the conduit 12 and puddle flange 84, the kit can also include the grate 98. It will thus be appreciated that the puddle flange 84 will be particularly shaped to suit the conduit 12. Still further, the grate 98 will also be shaped and configured to suit the conduit 12.

A particular advantage of providing the accessory 80 in the form of a kit is that a plumber will be in a position to install all the components necessary for drainage without having to source various components from different suppliers.

The conduit 12 and the grate frame 100 are of a plastics material.

In the example described above and as can be seen in the drawings, the conduit 12 is provided in two different sizes. It follows that the puddle flange 84

is also provided in two different configurations. One of the configurations is shown in FIGS 10 and 17, while the other configuration is shown in FIGS 19 and 20. It should be noted that the invention is in no way restricted to these two sizes and that they have been given only by way of illustration.

5

Further, the puddle flange 84 can be dimensioned so that the lower end portion 92 can either fit over an end of one form of standard drainpipe or within an end of another form of standard drainpipe.

- 10 As has been set out earlier, a major problem with the construction of floors incorporating drainage outlets is that screed material and pieces of tile are often disposed of in the drainpipe. In addition, various other items of waste such as empty cement packets are often used to block drainpipes, to prevent disposal of waste materials during construction in the drainpipes. The empty cement
- 15 packets themselves then cause substantial plumbing problems. The blockage of drainpipes as a result of this sort of activity is one of the main reasons for a plumber's first call out on a new construction.

- One of the significant advantages of this invention is that screed material and
- 20 tiles are inhibited from entering the drainage pipe 22. This is as a result of the removable closure being left in place until such time as it becomes necessary to mount the drain grate 98.

- It will of course be realised that the above has been given only by way of
- 25 illustrative example of the invention and that all such modifications and variations thereto as would be apparent to persons skilled in the art are deemed to fall within the broad scope and ambit of the invention as is herein set forth.

CLAIMS

1. An accessory for use in construction, the accessory including
5 a conduit that has an inlet end portion and an outlet end portion,
the outlet end portion being mountable on a drainage pipe so that the
conduit and the drainage pipe are in fluid communication with each other;
and
 a removable closure member which is mounted on the inlet end
10 portion to close the conduit when not in use so that the ingress of detritus
into the drainage pipe is inhibited.
2. The accessory as claimed in claim 1, which includes a reference level
15 arrangement that is positioned on the conduit and is configured so that,
when the conduit is mounted on the drainage pipe, the reference level
arrangement provides at least a reference level for a thickness of a
screed layer to be formed on a substrate.
3. The accessory as claimed in claim 2, in which the conduit is circular
20 cylindrical.
4. The accessory as claimed in claim 3, in which the inlet end portion is of
an enlarged diameter.
- 25 5. An accessory as claimed in claim 4, in which a distance between a
shoulder defined at a junction between the inlet end portion and a
remaining portion of the conduit and an end of the inlet end portion is at
least substantially equivalent to a desired thickness of a screed layer, so
that the inlet end portion defines the reference level arrangement.

6. An accessory as claimed in any one of the preceding claims, in which the removeable closure is connected to the inlet end portion by a zone of weakness to facilitate separation of the closure from the inlet end portion.
- 5 7. An accessory as claimed in any one of the preceding claims, in which the end portion has a plurality of openings defined therein to permit drainage of excess water collected about the inlet end portion.
- 10 8. An accessory as claimed in any one of the preceding claims, which includes a grate member that is received in the inlet end portion, once the closure has been removed.
- 15 9. An accessory as claimed in claim 8, in which the grate member is an assembly of a grate frame and a grate element.
- 20 10. An accessory as claimed in claim 9, in which the grate frame defines an inwardly extending lip on which the grate element is supported, while the grate element defines a shoulder that bears against the lip of the grate frame.
- 25 11. The accessory as claimed in any one of the preceding claims, which is of a plastics material.
- 30 12. The accessory as claimed in any one of the preceding claims, which includes a sealing member having a flange portion and a body portion, the body portion defining a passage in which the conduit is received and the flange portion being positioned to extend radially from the conduit when the conduit is received in the passage, the conduit and the body portion being attachable to a drain pipe positioned in a substructure, with the flange portion overlying an upper surface of the substructure.

13. An accessory as claimed in claim 12, in which the sealing member is of a suitable sealing material such as an elastomeric material.

14. A drainage kit, the kit including

5 a conduit that has an inlet end and an outlet end;

a removable closure that is mounted on the inlet end of the conduit to close the conduit when not in use; and

10 a sealing member having a flange portion and a body portion that defines a passage, the conduit being mountable on the body portion so that the outlet end of the conduit and the passage are in fluid communication with each other.

15. A kit as claimed in claim 14, which includes the accessory as claimed in any one of claims 1 to 13, inclusive.

16. A method of construction which includes the steps of

20 mounting a conduit on a drainage pipe, the conduit having an inlet end portion and an outlet end portion so that the conduit and the drainage pipe are in fluid communication with each other, the inlet end portion having a removable closure member to close the conduit when not in use so that the ingress of detritus into the drainage pipe is inhibited;

removing the closure member; and

25 positioning a grate member in the inlet end portion, once the closure member has been removed.

17. A new accessory for use in construction, substantially as described herein, with reference to the accompanying drawings.

30 18. A new drainage kit, substantially as described herein, with reference to the drawings.

19. A new method of construction, substantially as described herein, with reference to the accompanying drawings.

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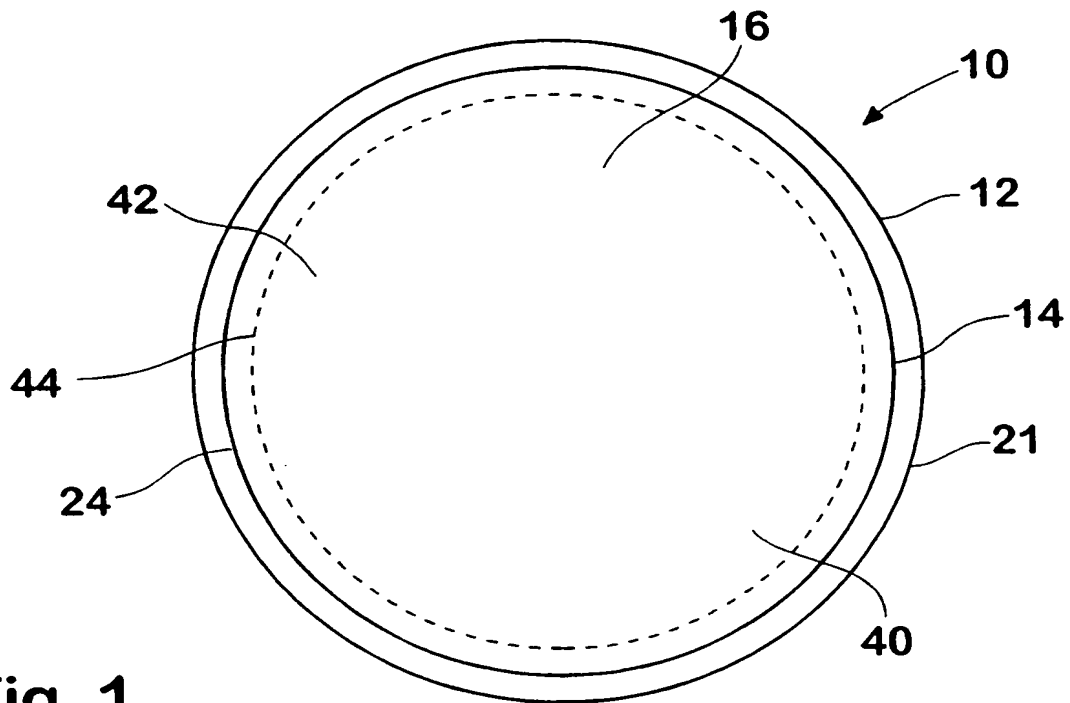


Fig. 1

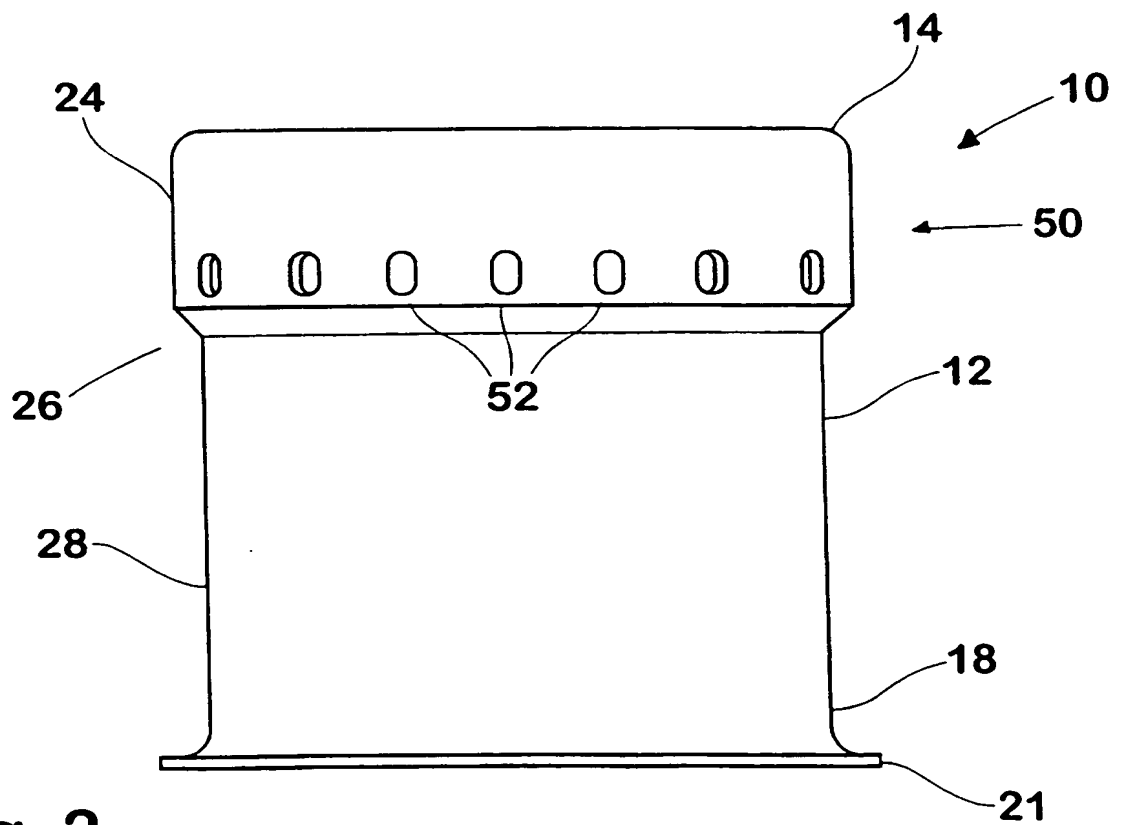
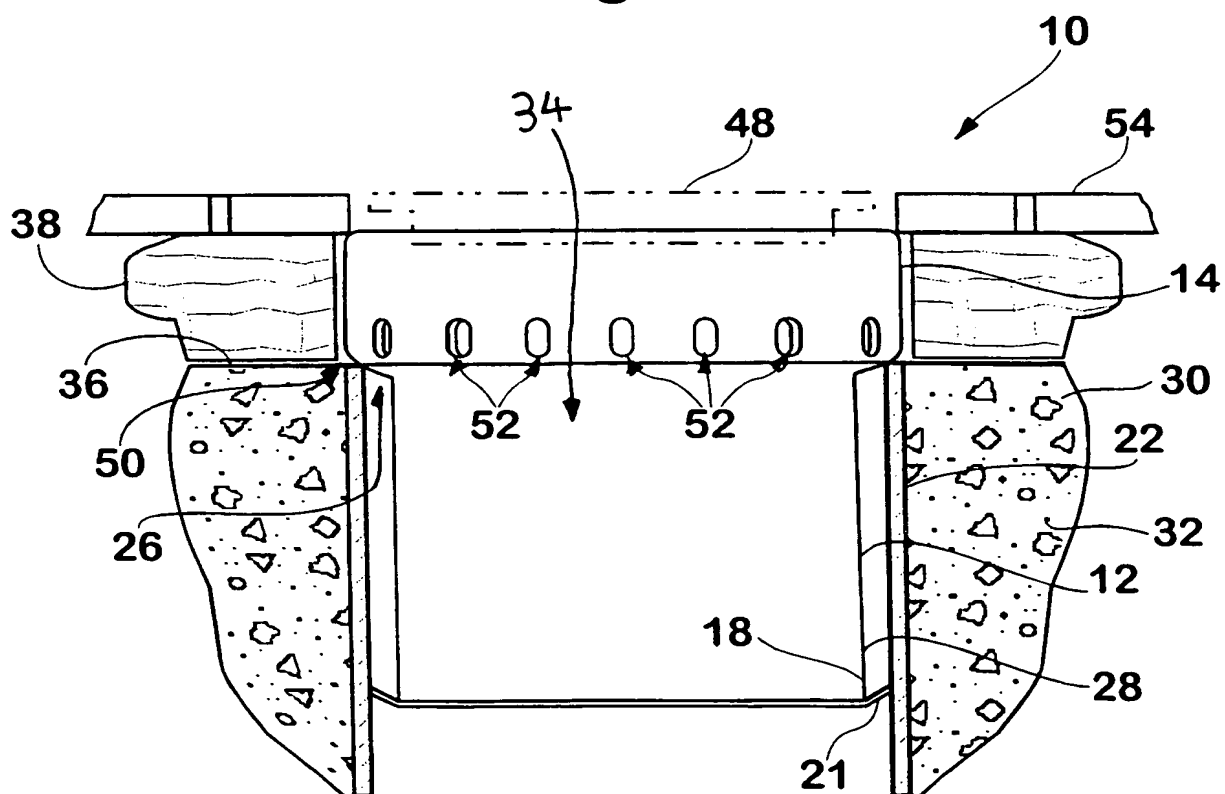
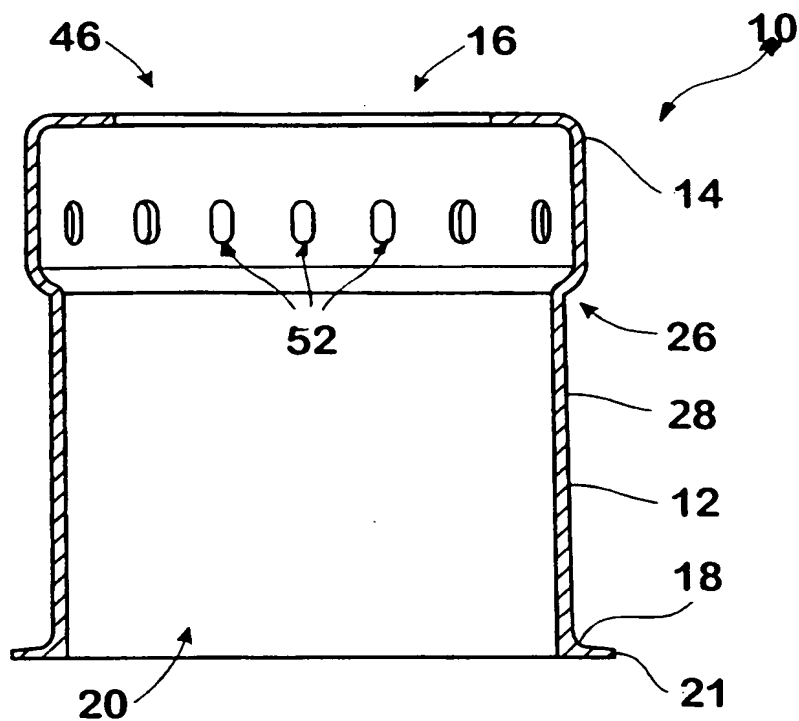


Fig. 2

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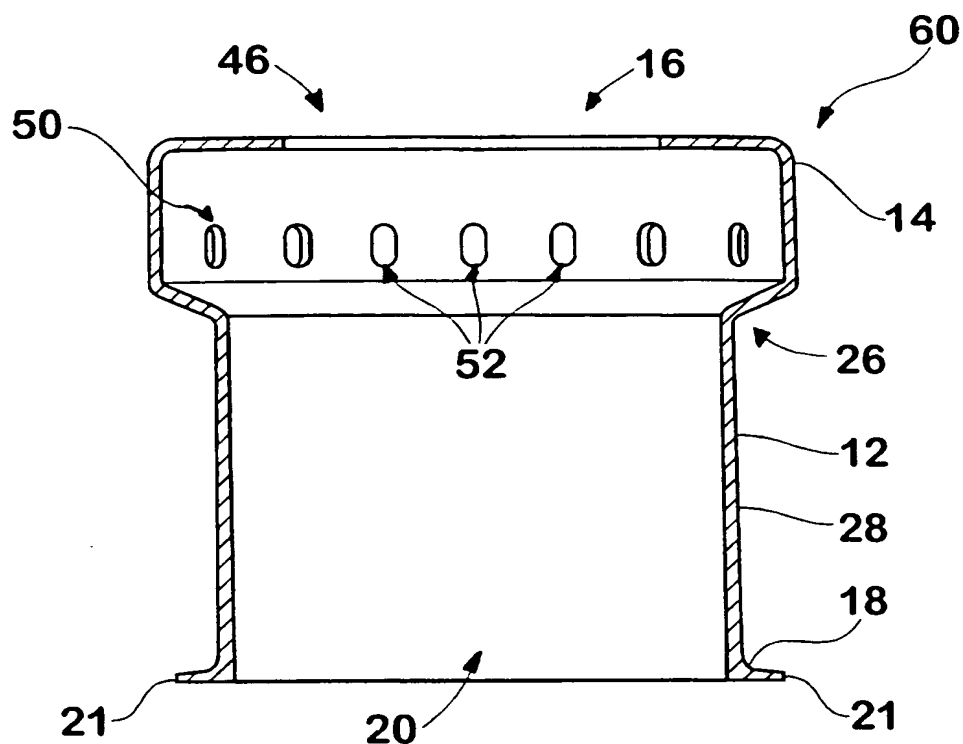


Fig. 5

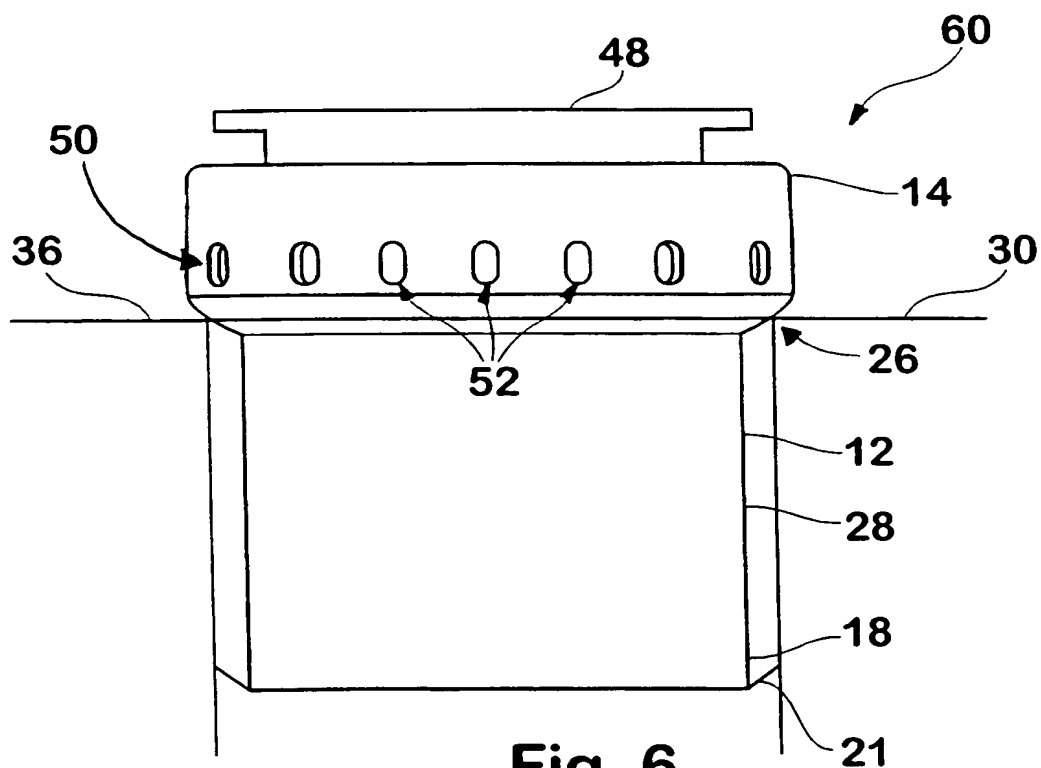


Fig. 6

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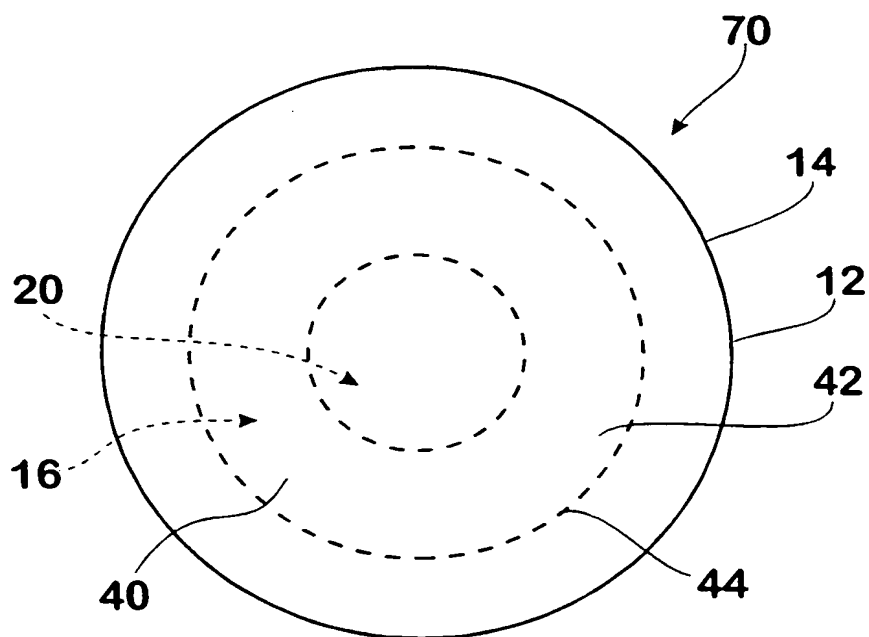


Fig. 7

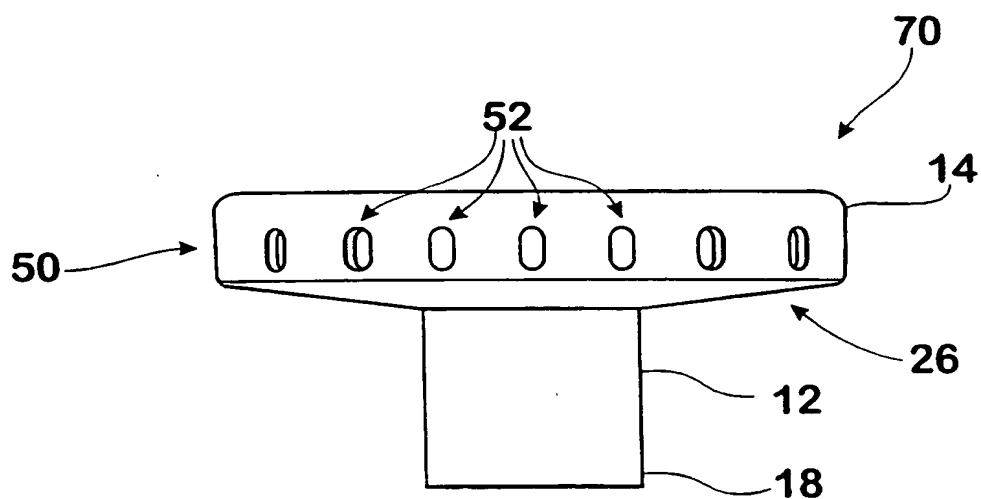


Fig. 8

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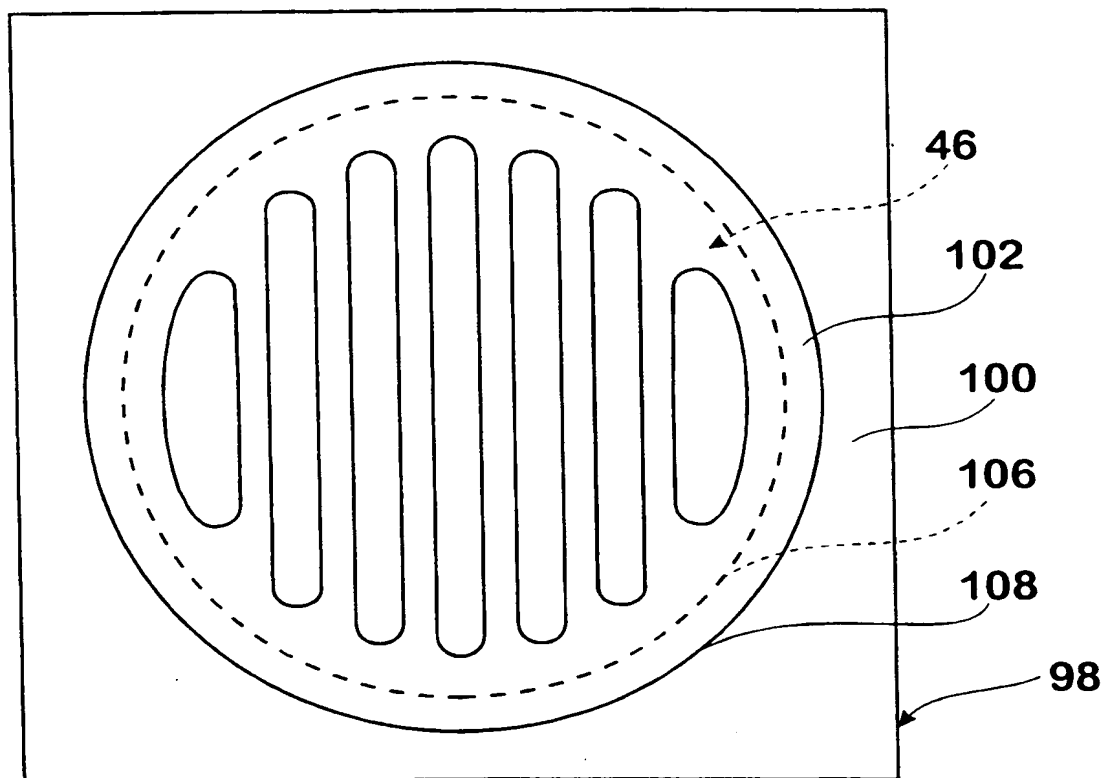


Fig. 11

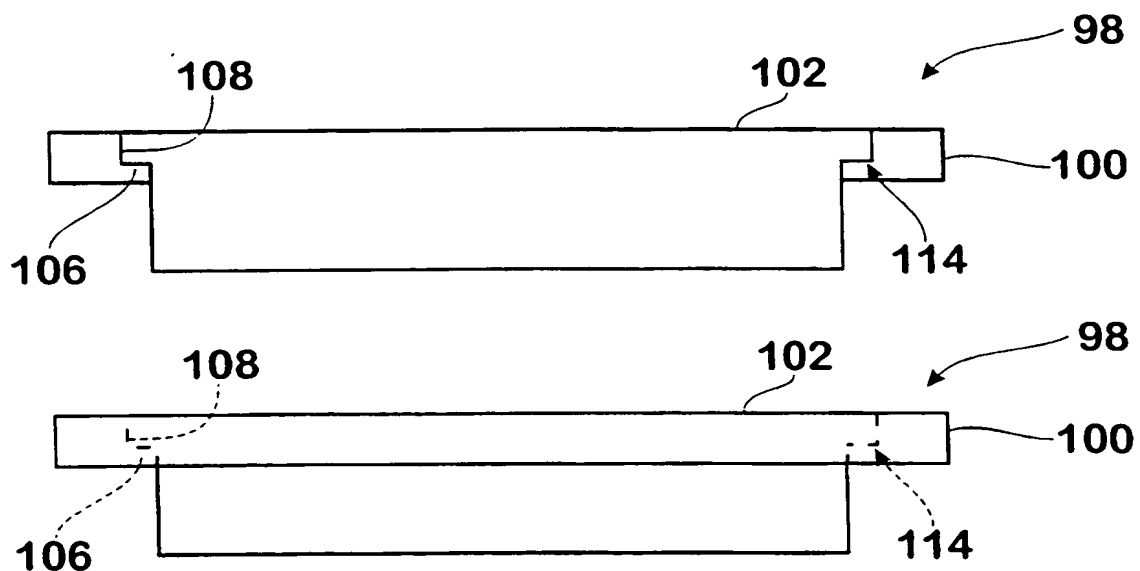


Fig. 12

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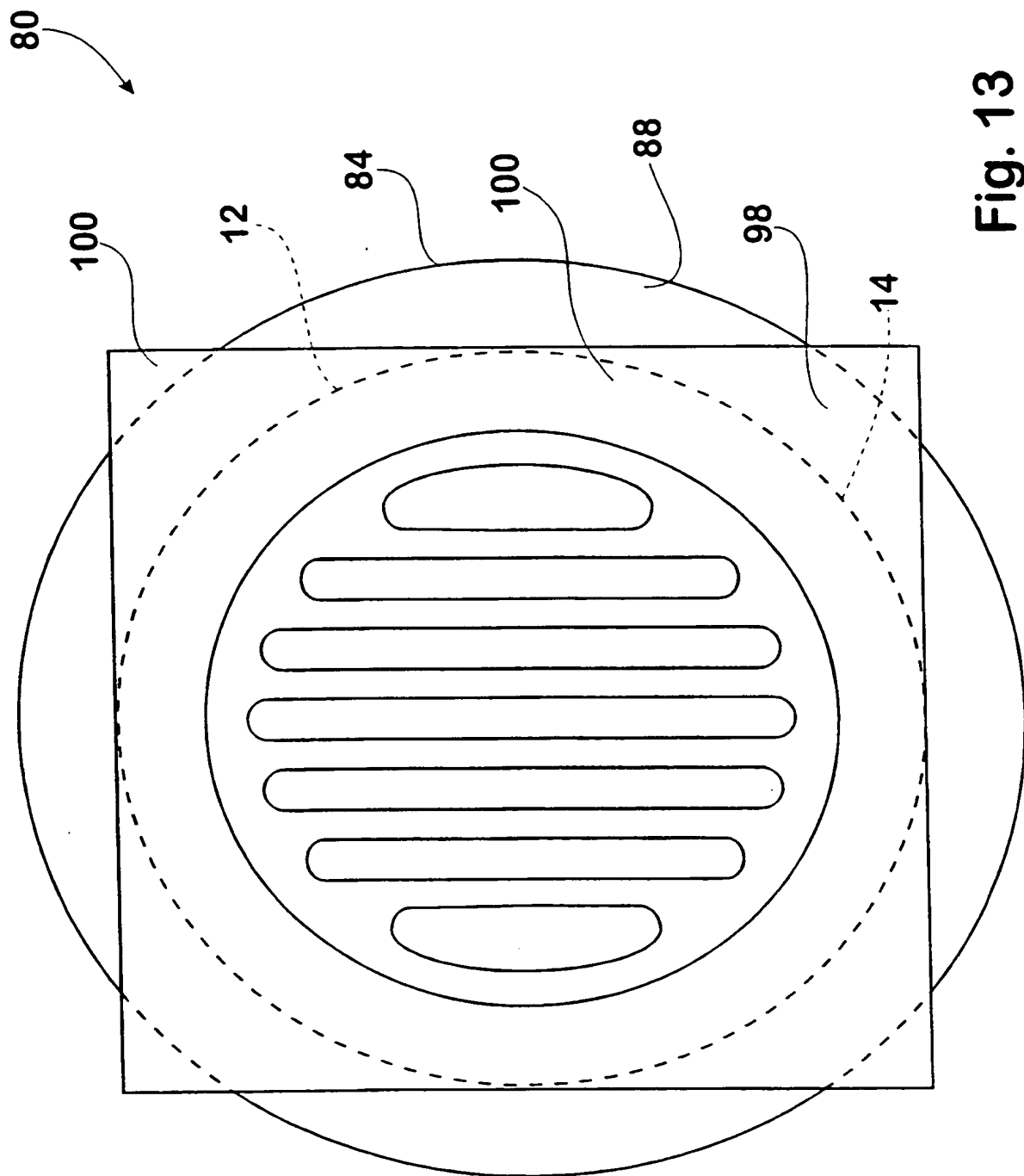


Fig. 13

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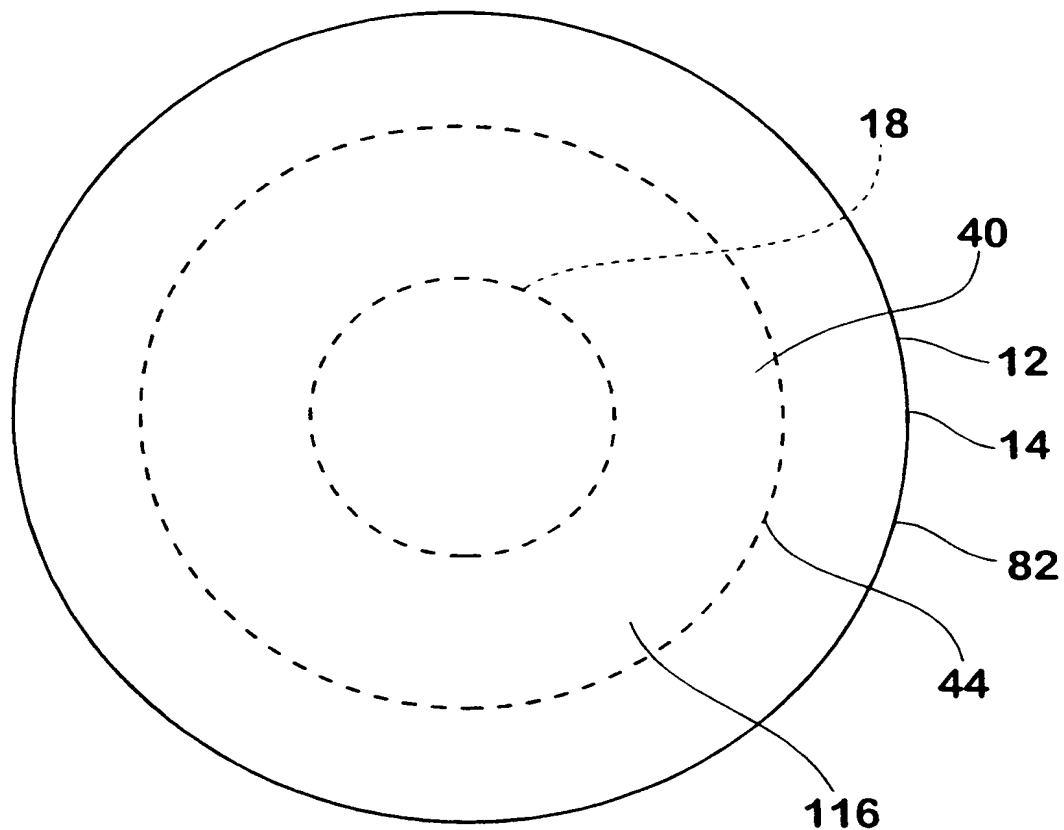


Fig. 14

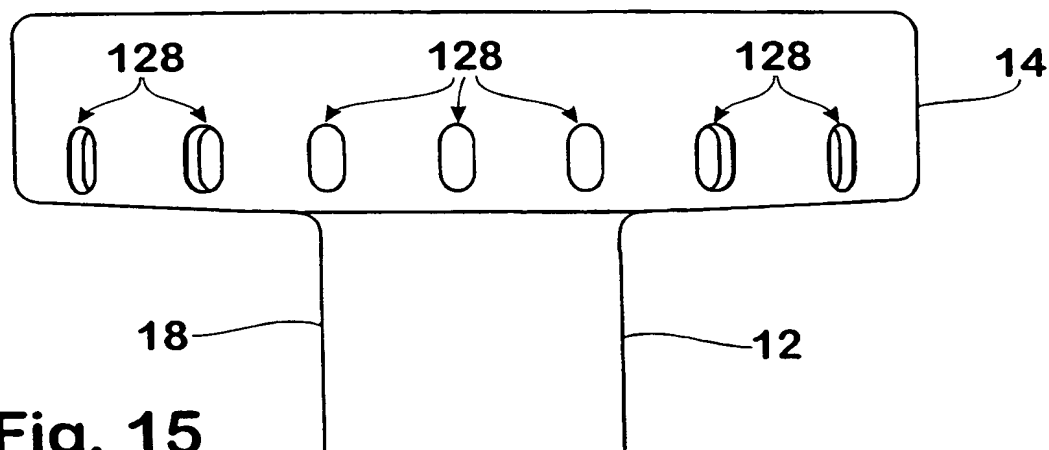


Fig. 15

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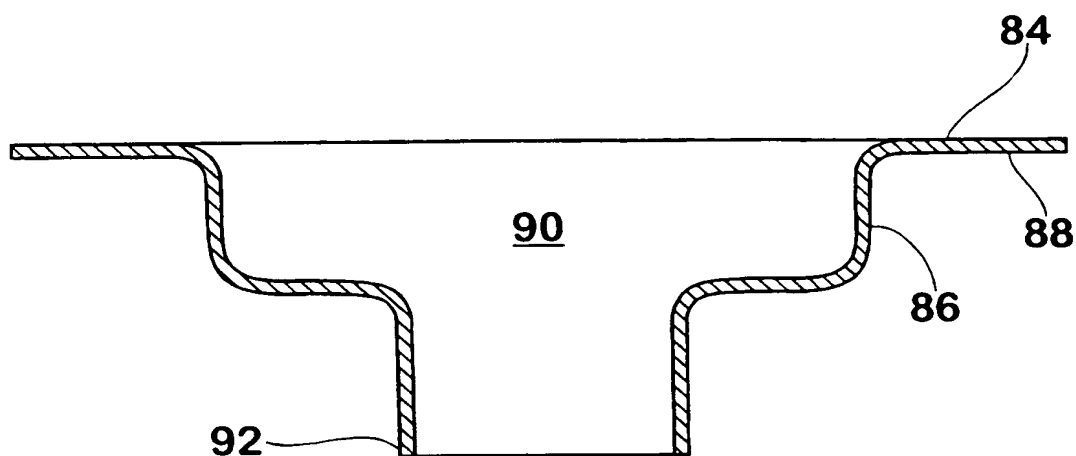


Fig. 16

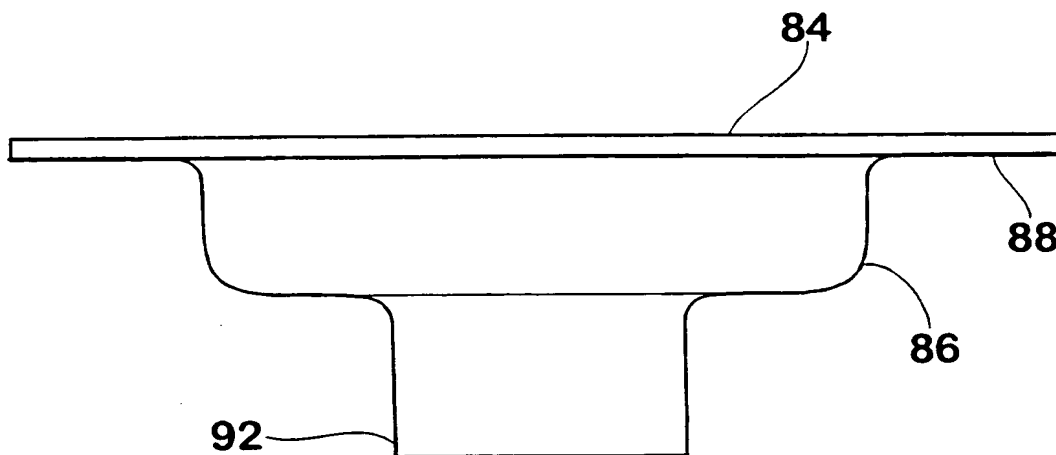
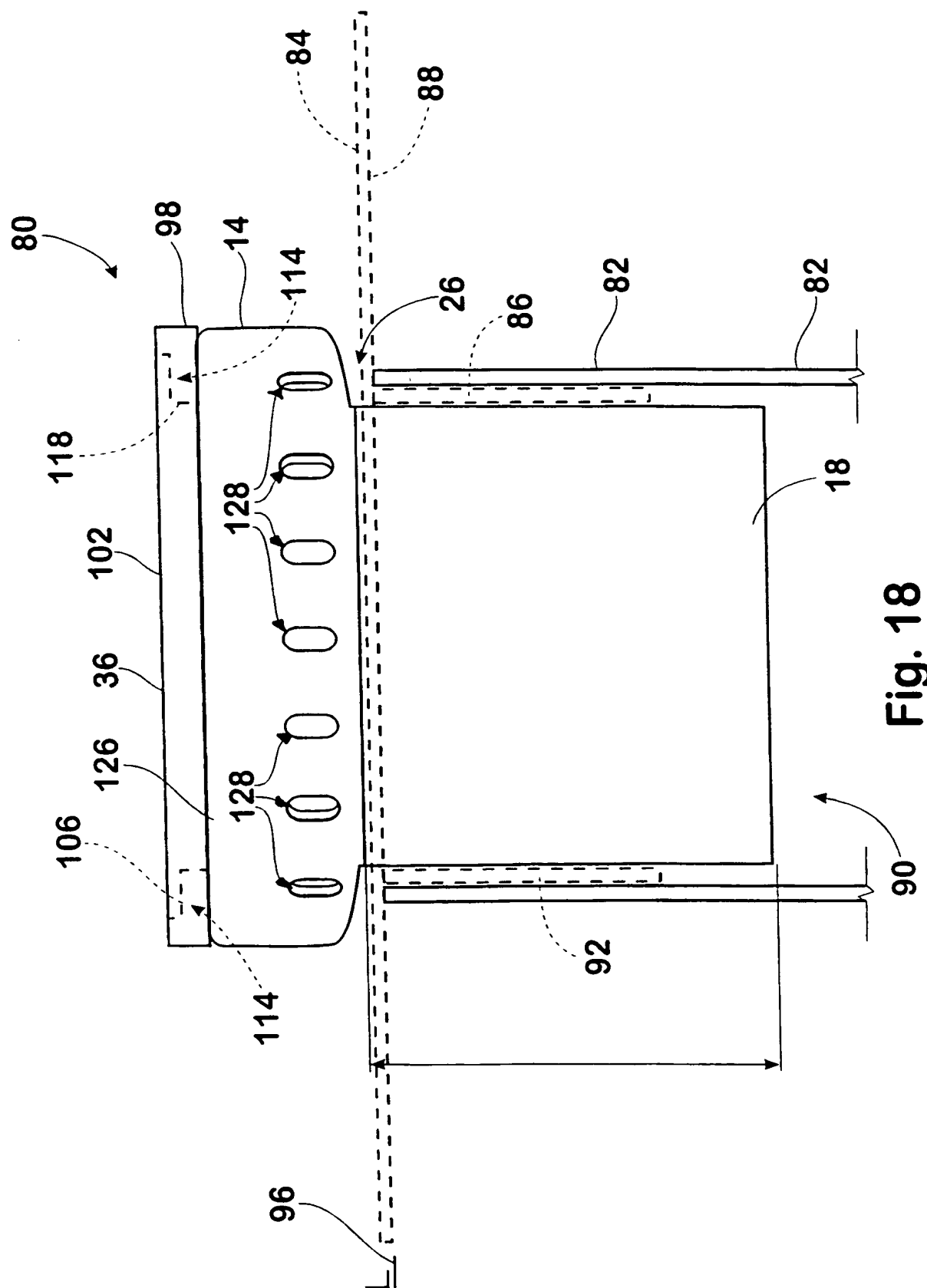


Fig. 17

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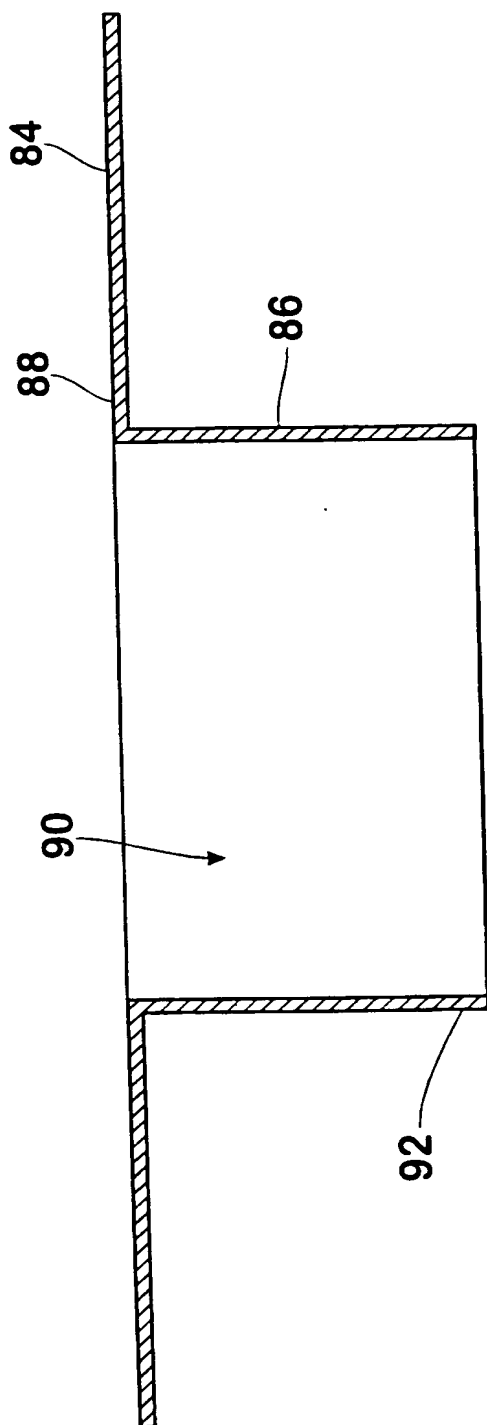


Fig. 19

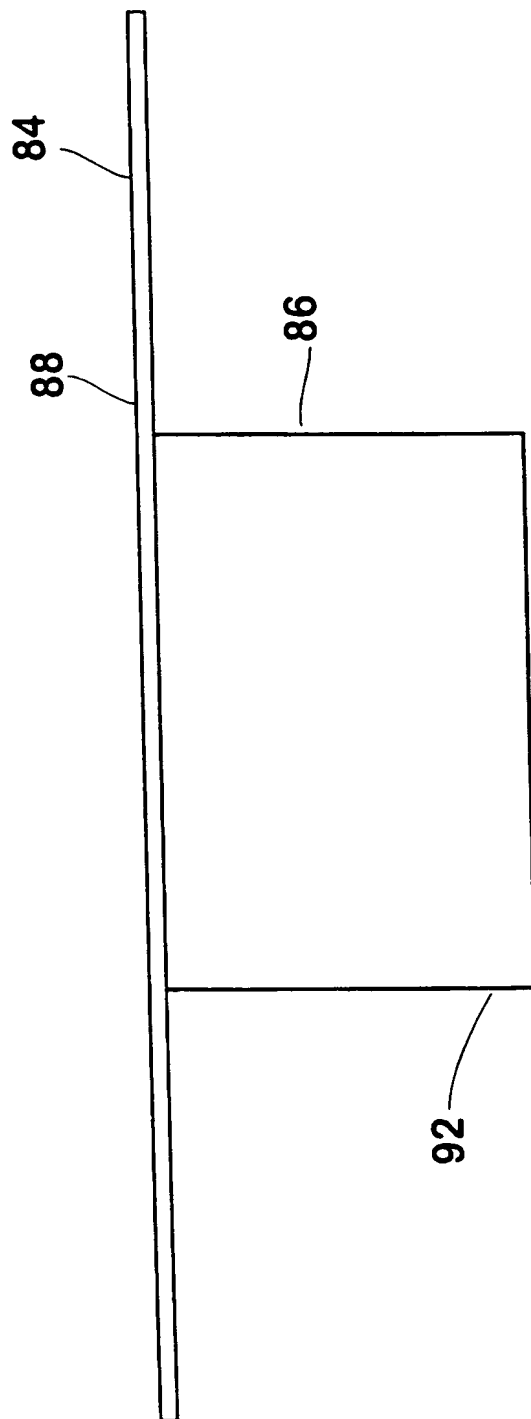


Fig. 20

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/01168**A. CLASSIFICATION OF SUBJECT MATTER**Int. Cl. ⁷: E03F 5/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

E03F 5/04, E04F 21/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

AU : IPC AS ABOVE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,Y	US 5921282, A (CASTILLO) 13 July 1999	1-5, 14-16
X,Y	DE 3620132 A (DALLMER) 24 September 1987	1-5, 14-16
X,Y	GB 2331529 A (DALLMER) 26 May 1999	1, 14-16
X,Y	AU 52071/98, A (CAROMA IND.) 23 July 1998	1, 14-16
Y	DE 4411521 A (FELLA) 5 October 1995	1,2
Y	DE 4329652 A (SCHWARZ) 30 March 1995	1,2

☒ Further documents are listed in the continuation of Box C
 ☒ See patent family annex

- * Special categories of cited documents:
- | | |
|---|---|
| <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> | <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p> |
|---|---|

Date of the actual completion of the international search

14 November 2000

Date of mailing of the international search report

16 NOV 2000

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/01168

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 3819173 A (GRUMBACH) 14 December 1989	1, 14-16
Y	EP 51316 A (SCHMITZ) 12 May 1982 *****	16

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU00/01168

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member	
US	5921282	CA	2232927	US	6076559
DE	3620132				
GB	2331529	DE	19751344		
AU	52071/98	NZ	329587		
DE	4411521	NONE			
DE	4329652	NONE			
DE	3819173	NONE			
EP	51316	DE	3041353		
END OF ANNEX					